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DERWENT-WEEK: 200019
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TITLE: Piezoelectric power supply for motor vehicle has
booster connected
between rectifier and capacitor to boost amplified
rectified piezoelectric
voltage, and charge capacitor

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PRIORITY-DATA: 1998JP-0147865 (May 28, 1998)

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE |
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| JP 11341837 A | December 10, 1999 | N/A |
| 005 | H02N 002/00 | |

APPLICATION-DATA:

| PUB-NO | APPL-DESCRIPTOR | APPL-NO |
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| JP 11341837A | N/A | 1998JP-0147865 |
| May 28, 1998 | | |

INT-CL (IPC): H02M003/155; H02N002/00

ABSTRACTED-PUB-NO: JP 11341837A

BASIC-ABSTRACT: NOVELTY - A capacitor (C2) is charged by
the rectified
piezoelectric voltage output of a rectifier (40). The
piezoelectric voltage is
generated by piezoelectric elements, based on applied
oscillation. A booster
(50) is provided between the rectifier and the capacitor to
boost the rectified
piezoelectric voltage and to charge the capacitor.
DETAILED DESCRIPTION - The
booster has a transistor (T1) that is turned ON when
piezoelectric voltage is
impressed through a diode (D2) and a resistor (R1). When
current flows through
transistor, electromagnetic energy is stored in an

electromagnetic coil (K1).
The energy of coil is used to charge the capacitor through
a diode (D3) when
transistor turns OFF.

USE - The piezoelectric power supply is used for motor
vehicle.

ADVANTAGE - Enables storage of energy even when
piezoelectric element
oscillates at non-resonant frequency efficiently.

DESCRIPTION OF DRAWING(S) -

The figure shows electric circuit diagram of piezoelectric
power supply. (40)

Rectifier; (50) Booster; (C2) Capacitor; (D1-D3) Diode;
(K1) Electromagnetic
coil; (R1) Resistance; (T1) Transistor.

CHOSEN-DRAWING: Dwg.1/5

TITLE-TERMS:

PIEZOELECTRIC POWER SUPPLY MOTOR VEHICLE BOOST CONNECT

RECTIFY CAPACITOR BOOST

AMPLIFY RECTIFY PIEZOELECTRIC VOLTAGE CHARGE CAPACITOR

DERWENT-CLASS: U24 V06 X12

EPI-CODES: U24-D02A; V06-M06D1; X12-J02A;

SECONDARY-ACC-NO:

Non-CPI Secondary Accession Numbers: N2000-160100

CLIPPEDIMAGE= JP403251261A

PAT-NO: JP403251261A

DOCUMENT-IDENTIFIER: JP 03251261 A

TITLE: ELECTRONIC APPARATUS WITH POWER GENERATING MECHANISM

PUBN-DATE: November 8, 1991

INVENTOR-INFORMATION:

NAME

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ASSIGNEE-INFORMATION:

NAME

MURATA MFG CO LTD

COUNTRY

N/A

APPL-NO: JP02050431

APPL-DATE: March 1, 1990

INT-CL (IPC): A61N001/378;A61N001/362

US-CL-CURRENT: 607/35

ABSTRACT:

PURPOSE: To omit a battery in a medical electronic apparatus of an embedded type by providing a piezoelectric type power generating mechanism which is embedded in a living body and generates charge by vibration in the living body, a capacitor for accumulating the generated charge, and an electronic circuit connected to the capacitor.

CONSTITUTION: A piezoelectric bimorph 1 has a constitution in which a piezoelectric element 3 is stuck to one principal plane of a disk-like metallic plate 2, and generates charge by receiving vibration in a living body. As for a piezoelectric material for constituting the piezoelectric

bimorph 1, a material whose electro-mechanical conversion efficiency is high, and whose piezoelectric constant (d) is large, for instance, lead zirconate-titanate is used suitably. The charge generated by the piezoelectric bimorph 1 is rectified by allowing it to pass through a rectifying circuit 6. To a post-stage of the rectifying circuit 6, a capacitor 7 is connected, and in the capacitor 7, the rectified charge is accumulate. The charge accumulated in the capacitor 7 is given as a current of a prescribed voltage to an electronic circuit 9 through a constant- voltage circuit 8. To the electronic circuit 9, driving power based on vibration in the living body is given without necessitating a battery, and a surgical operation at the time of changing the battery can be omitted.

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| | Type | L # | Hits | Search Text | DBs | Time Stamp | Comments |
|---|------|-----|------|---|--|----------------------|----------|
| 1 | IS&R | L1 | 25 | (310/339).CCLS. | US-P GPUB ; EPO; JPO; DERW ENT; IBM- TDB | 2002/08/2 6 07:55 | |
| 2 | IS&R | L2 | 67 | (310/338).CCLS. | US-P GPUB ; EPO; JPO; DERW ENT; IBM- TDB | 2002/08/2 6 08:00 | |
| 3 | IS&R | L3 | 421 | (310/338).CCLS. | USPA T | 2002/08/2 6 08:04 | |
| 4 | BRS | L4 | 586 | piezoelectric same (rectifier or rectified or rectification) | USPA T | 2002/08/2 6 08:47 | |
| 5 | BRS | L5 | 30 | piezoelectric same (rectifier or rectified or rectification) | US-P GPUB | 2002/08/2 6 08:54 | |
| 6 | BRS | L6 | 412 | piezoelectric same (rectifier or rectified or rectification) | EPO; JPO; DERW ENT; IBM- TDB | 2002/08/2 6 08:54 | |